

ABSTRACT

A refrigerator having a main body, and a compressor and an evaporator in the main body, comprises a heat pipe forming a closed loop so as to allow the refrigerant to be circulated therein; a first heat exchanger provided in the heat pipe, absorbing heat generated from the compressor; a second heat exchanger provided in an upper part between the heat pipe and the first heat exchanger adjacent to the evaporator, discharging heat into the evaporator; and a control valve positioned between the first and second heat exchangers, opening and closing the heat pipe, wherein the refrigerant cooled and liquified in the second heat exchanger forces out the refrigerant heated and gasified in the first heat exchanger by gravity, when the control valve is opened. With this configuration, the present invention provides a defroster and refrigerator employing the same which has a simplified structure, capable of easily removing the frost on the evaporator by circulating the refrigerant with the use of the waste heat of the compressor, without power consumption. Further, the present invention provides a defroster and refrigerator employing the same, in which the temperature sensing part sensing the surface temperature of the evaporator, so that the defrosting process is performed whenever the temperature sensed by the temperature sensor is lower than the reference temperature and the compressor is in suspension. Therefore, the frost deposited on the evaporator, even though it is of the small amount, can be removed, thereby enhancing the performance of the evaporator. Further, the frost is prevented from being partially deposited on the evaporator, thereby preventing the inner temperature of the refrigerator from being increased according as a part of the evaporator, on which the frost is not deposited, is heated while the defrosting operation is performed. Further,

the present invention provides a defroster and refrigerator employing the same, in which the control valve alternates between the opened state and the closed state at regular intervals, so that the surface temperature of the compressor is prevented from being rapidly lowered, thereby performing the defrosting operation effectively.